

## Refine Search

### Search Results -

Terms	Documents
L3	38

Database:

US Pre-Grant Publication Full-Text Database  
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Search:

L4





### Search History

DATE: Tuesday, January 20, 2004   [Printable Copy](#)   [Create Case](#)

#### Set Name Query

side by side

DB=USPT; PLUR=YES; OP=ADJ

<u>L4</u>	<u>L3</u>
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<u>L3</u>	(character\$ near5 debug\$) and (line\$ near7 execut\$)
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<u>L2</u>	(character\$ near5 debug\$) and (line\$ near7 exect\$)
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<u>L1</u>	(charecter\$ near5 debug\$) and (line\$ near7 exect\$)
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#### Hit Count Set Name

result set

38	<u>L4</u>
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38	<u>L3</u>
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0	<u>L2</u>
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END OF SEARCH HISTORY

## Refine Search

### Search Results -

Terms	Documents
L1 and (partition\$ or compartment\$ or divis\$) near5 resource\$	8

Database:

US Pre-Grant Publication Full-Text Database  
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Search:

L5

Refine Search

Recall Text

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### Search History

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<u>Set</u> <u>Name</u> side by side	<u>Query</u>	<u>Hit</u> <u>Count</u>	<u>Set</u> <u>Name</u> result set
<i>DB=USPT; PLUR=YES; OP=ADJ</i>			
<u>L5</u>	11 and (partition\$ or compartment\$ or divis\$) near5 resource\$	8	<u>L5</u>
<u>L4</u>	11 and (independent near5 developer\$ ) and (access\$ or restriction\$ or without authori\$)	0	<u>L4</u>
<u>L3</u>	11 and (access\$ or restriction\$ or without authori\$)	108	<u>L3</u>
<u>L2</u>	L1 and resourc\$ near5 (html or markup\$)	6	<u>L2</u>
<u>L1</u>	(writ\$ or develop\$ or implement\$ or generat\$) near5 (software\$ Or code\$ or program\$) and (modif\$ or updat\$ or chang\$) near5 resource\$ and (graphical\$ near5 resource\$)	118	<u>L1</u>

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L5: Entry 2 of 8

File: USPT

Sep 10, 2002

DOCUMENT-IDENTIFIER: US 6449643 B1

TITLE: Access control with just-in-time resource discovery

Abstract Text (1):

An access control system for a network manager system provided with a plurality of building blocks (BBs), each specialized for executing a plurality of functions on a plurality of resources of the network, and with a graphical user interface (GUI). Each BB comprises a database for storing access control data pertinent to said component including all resources accessible to the BB, all functions executable by the BB and all users that have the right to use the BB, according to privileges allocated to each user. The BB also comprises an access control library for writing and reading the access control data to and from the database for execution of a network operation according to the respective privileges. The access control system further comprises an access control user interface connected to the access control library of each BB, for viewing and editing the access control data on the GUI.

Brief Summary Text (9):

A component or an object is an encapsulated part of a software system with a well defined interface. Components serve as the building blocks of a systems, or the elements of a software part list, and can be either generic or application specific. Generic components serve as a system skeleton, enabling code reuse and faster development of new capabilities.

Brief Summary Text (19):

Rule based systems can provide access control resources in scenarios where all resources are not available. These systems apply rules to resource properties to determine privileges, however these systems do not allow rules to be overridden on a per resource basis and have changes retained, especially after knowledge that the resource was lost. For example, Unix 'forgets' file permissions if a file is destroyed and recreated.

Brief Summary Text (27):

Accordingly, in a network manager system provided with a plurality of components specialized for executing a plurality of functions on a plurality of resources of a network, and with a graphical user interface (GUI), an access control system comprising, at a component of the network manager, a database for storing access control data pertinent to the component including all resources accessible to the component, all functions executable by the component and all users that have the right to use the component, according to a set of privileges for each user, an access control library for writing and reading the access control data to and from the database for execution of a network operation according to the set of privileges on request from a user having the set of privileges, and an access control user interface connected to the access control library for viewing and editing the access control data on the GUI.

Brief Summary Text (28):

Further, in a network manager system provided with a plurality of components specialized for executing a plurality of functions on a plurality of resources of a network, and with a graphical user interface (GUI), a method for controlling access of a user comprising the steps of storing, in a database of a component of the

network manager, access control data pertinent to the component including all resources accessible to the component, all functions executable by the component and all users that have the right to use the component, accessing the database with an access control library for using the access control data for execution by a user of a network operation according to a set of privileges on accorded to the user, viewing the access control data on the GUI using an access control user interface connected to the access control library, and editing the access control using the access control user interface.

Brief Summary Text (33):

The partitioning engine according to the invention, handles storing rules for user rights, i.e. user groups, inheritance of rights, etc. The partitioning engine stores three-dimensional matrices of users, functions, and resources, each matrix containing only functions that could apply to the resource in that matrix. A distributed component advertises its functions and resources into a particular matrix in the partitioning engine. A component requiring access control requests user rights against the functions and resources they support from the partitioning engine.

Detailed Description Text (47):

Administration interface 56 is a keyed CORBA interface that only allows a single ACUI to connect to the respective BB. It allows ACUI 34 to get the list of resources for each matrix used by the BB, get a slice of a matrix given two dimensions, get an individual entry given three dimensions, set a slice or individual entry of a matrix, do bulk update resource list for multiple BB matrices, and notify the BB of a deleted user or user group.

Detailed Description Text (69):

Updates. For multiple BB matrices only, administration interface 56 bulk-updates the resource list and transmits it to the ACUI, and performs resource list synchronization on instruction from ACUI, shown by arrows I and h.

Detailed Description Text (86):

Then the resource and function axes are requested from the BBs 3A and 3B in steps 94 and 95, and collected in steps 96 and 97. Each list is combined to provide the user of the ACUI with a single list view. Thus, the resources are combined as shown at 98 and the modify access matrix is populated with this data in step 99. Similarly, the matrix is populated with the function list in steps 100 and 101 and the BBs are also notified of the combined list in steps 102 and 103. The user group list was retrieved from the CSS on initialization (see FIG. 7), but is also illustrated on this figure as steps 104 to 106 for completeness.

CLAIMS:

14. A method as claimed in claim 5, wherein said step of storing said access control data in said database comprises: providing in a designated area of said database default values for said resource data, function data and user data of said matrix, by said access control user interface through said read interface; assigning a name to said matrix; updating said default values with data on current resources and current functions available to said access control building block, provided by said access control building block; and updating said default values with data on current users and user groups, and the corresponding privileges, with said access control user interface.

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L5: Entry 3 of 8

File: USPT

Jun 11, 2002

DOCUMENT-IDENTIFIER: US 6404444 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Method and apparatus for displaying and controlling allocation of resource in a data processing system

Abstract Text (1):

A method and apparatus in a data processing system for displaying resource allocation information. Allocations of a resource are identified. A plurality of cylinders is displayed, wherein each cylinder within the plurality of cylinders provides a graphical representation of an allocation of the resource relative to other cylinders within the plurality of cylinders.

Brief Summary Text (3):

The present invention relates generally to an improved data processing system and in particular to a method and apparatus for displaying a graphical user interface. Still more particularly, the present invention relates to a method and apparatus for displaying controls in a graphical user interface to display and control resource allocation by a data processing system.

Brief Summary Text (9):

One use of GUIs is in the display of resources consumed within a data processing system. Presently available interfaces will display information to the user about available resources and resources that are being used. The presently available interfaces, however, are cumbersome and often times will use large amounts of the display in the data processing system. Further, if a user wishes to adjust the allocation of resources, the user often will have to use a different interface or a different control. Often times, these controls will require a user to enter a quantitative input in the form of a number to change an allocation of resources.

Brief Summary Text (12):

The present invention provides a method and apparatus in a data processing system for displaying resource allocation information. Allocations of a resource are identified. A plurality of geometric shapes, such as cylinders, is displayed, wherein each geometric shape within the plurality of geometric shape provides a graphical representation of an allocation of the resource relative to other geometric shapes within the plurality of geometric shapes.

Drawing Description Text (12):

FIGS. 10A and 10B is a diagram illustrating pseudo code for displaying resources and partition depicted in accordance with a preferred embodiment of the present invention;

Drawing Description Text (13):

FIG. 11 is a diagram illustrating pseudo code for manipulating or changing allocation of resources depicted in accordance with a preferred embodiment of the present invention; and

Detailed Description Text (2):

With reference now to the figures and in particular with reference to FIG. 1, a pictorial representation depicts a data processing system in which the present

invention may be implemented in accordance with a preferred embodiment of the present invention. A personal computer 100 is depicted which includes a system unit 110, a video display terminal 102, a keyboard 104, storage devices 108, which may include floppy drives and other types of permanent and removable storage media, and mouse 106. Additional input devices may be included with personal computer 100. Personal computer 100 can be implemented using any suitable computer, such as an IBM Aptiva.TM. computer, a product of International Business Machines Corporation, located in Armonk, N.Y. Although the depicted representation shows a personal computer, other embodiments of the present invention may be implemented in other types of data processing systems, such as network computers, Web based television set top boxes, Internet appliances, etc. Computer 100 also preferably includes a graphical user interface that may be implemented by means of systems software residing in computer readable media in operation within computer 100.

Detailed Description Text (8):

The present invention provides a method, apparatus, and instructions for a control and display system in a graphical user interface to monitor and manage the allocation of a resource into various apportionments. For example, the resource may be a storage space in which various logical volumes or file systems have been created. The present invention provides a mechanism to display the total sum of the resource in the system, the amount of resource in each of a number of apportionments, the amount of resource that is not currently allocated to any apportionment, and the relative amount of each apportionment that is used and unused. The mechanism provides an interface in which a single intuitive control can be simultaneously used for displaying status information about the resource and for modifying allocations and apportionments in the resource.

Detailed Description Text (11):

With reference now to FIG. 3, a graphical user interface for indicating the status of a resource and for managing the resource is depicted in accordance with a preferred embodiment of the present invention. In the depicted examples, the resource is that of storage space in which various apportionments, such as file systems for logical volumes are displayed within the graphical user interface (GUI) and provide a control for managing these apportionments.

Detailed Description Text (12):

In the depicted example, GUI 300, is a display of a stack of cylinders, including cylinders 302-312. Each cylinder in GUI 300, represents an apportionment of that resource with the height or volume of the cylinder representing the amount of the resource. Sections 302a-310a indicate the used or consumed portions of each cylinder while sections 302b-310b illustrate the unused or unconsumed portions of the apportionment. Cylinder 312 indicates the unallocated portions of the resource. As a result, the division of the cylinders represents the amount of resources currently consumed and unconsumed. The top most cylinder, cylinder 312, is shown as an open or transparent cylinder, which represents the unallocated portion of the resources.

Detailed Description Text (14):

In addition to providing a status display for indicating the relative amount of resource apportionments, the amounts consumed and unconsumed in each apportionment, and the amount of unallocated resource, GUI 300 may be used as a control to receive input for making changes in the allocation of resources.

Detailed Description Text (18):

When the user releases the mouse button or finishes the change in cylinder 406, dotted line 420 disappears with the change in the allocation of resources being finalized or put in place. Further, a change in color may indicate that the resource has been increased to an amount in which unconsumed resources are above a threshold. For example, section 406a may be in red in FIG. 4A and change to green in FIG. 4B when the allocation has changed.

Detailed Description Text (19):

In FIGS. 5A-5C, diagrams illustrating the management of resources using a graphical interface is depicted in accordance with a preferred embodiment of the present invention. In this example, GUI 500 contains cylinders 502-512, in which cylinder 502 indicates the total amount of unallocated resource. In this example, pointer 514 is used to select hot spot 516 and cylinder 506, which in this example is the vertical line. Section 518 in cylinder 506 indicates the amount of unconsumed resource in 506 while section 520 indicates the amount of consumed resource in cylinder 506.

Detailed Description Text (25):

Thus, the present invention provides a mechanism in which a control is able to display an apportionment resources, unallocated resources, available resources within apportionment, and currently consumed resources in apportionments in a single graphical control. Further, this control may also be used to manipulate or change the apportionments and the allocations of resources.

Detailed Description Text (35):

With reference now to FIG. 10, a diagram illustrating pseudo code for displaying resources and partition is depicted in accordance with a preferred embodiment of the present invention. Section 1000 illustrates the identification of various variables used in the pseudo code for displaying resources and partitions. Section 1002 illustrates code for actually processing the various partitions and displaying the resources in the form of cylinders.

Detailed Description Text (36):

With reference now to FIG. 11, a diagram illustrating pseudo code for manipulating or changing allocation of resources is depicted in accordance with a preferred embodiment of the present invention. Section 1100 indicates the highlighting of various phases depending on the position of the pointer. Section 1102 illustrates the instructions used to change the display of the partition size based on an increase or decrease of the allocation of resources in a cylinder. The code in section 1102 is that used to actually change the size of the partition as illustrated in FIGS. 4A-4C.

Detailed Description Text (37):

With reference now to FIG. 12, a diagram of pseudo code for managing allocation of resources is depicted in accordance with a preferred embodiment of the present invention. Section 1200 illustrates code used to highlight portions of the cylinder depending on the location of the pointer. Section 1202 illustrates the instructions used to increase or decrease an allocation of resources to a cylinder in response to a change in the unconsumed or unallocated portion of a cylinder. The instructions in this section correspond to the illustrations in section FIGS. 5A-5C. The pseudo code illustrated in the figures use notation borrowed from Visual Basic.

Detailed Description Text (39):

The description of the present invention has been presented for purposes of illustration and description, but is not intended to be exhaustive or limited to the invention in the form disclosed. Many modifications and variations will be apparent to those of ordinary skill in the art. Although the depicted examples deals with a data processing resource, the present invention can be applied to other types of resources. The resource could be any type of resource that is partitioned into pools each of which is further subdivided. Another example might be software for managing an employee's 401K plan--where the total resource is the total amount of funds that can be contributed each pay period for an employee. The total of the cylinders is the total contribution each month, each cylinder represents a different investment fund allocation in the 401K plan. Cylinders are then subdivided into the employee contribution to each fund, and a matching

contribution from the employer. The embodiment was chosen and described in order to best explain the principles of the invention, the practical application, and to enable others of ordinary skill in the art to understand the invention for various embodiments with various modifications as are suited to the particular use contemplated.

CLAIMS:

1. A method in a data processing system for displaying resource allocation information, the method comprising the data processing system implemented steps of:

identifying allocations of a resource; and

displaying a plurality of geometric shapes, wherein each geometric shape within the plurality of geometric shapes provides a graphical representation of an allocation of the resource relative to other geometric shapes within the plurality of geometric shapes, wherein each geometric shape includes an indication of an unconsumed portion of the allocation and an indication of a consumed portion of the allocation.

9. The method of claim 1 further comprising:

providing an input means in the plurality of geometric shapes for receiving user input;

responsive to receiving user input directed towards a selected geometric shape within the plurality of geometric shapes, changing the allocation of the resource represented by the geometric shape, wherein a changed allocation of the resource occurs for the selected geometric shape; and

redisplaying the plurality of geometric shapes to account for changed allocation.

17. A method in a data processing system for displaying resource allocation information, the method comprising the data processing system implemented steps of:

displaying a plurality of cylinders in an array, wherein each cylinder within the plurality of cylinders provides a graphical representation of an allocation of the resource relative to other cylinders within the plurality of cylinders;

providing a plurality of hot spots of the plurality of cylinders, wherein each hot spot is used to receive input to adjust the allocation of the resource for the cylinder associated with the hot spot; and

responsive to receiving user input to adjust the allocation, adjusting the allocation of the resource for the cylinder associated with the hot spot, wherein each cylinder includes an indication of an unconsumed portion of the allocation and an indication of a consumed portion of the allocation.

22. A graphical control for use in a data processing system to manage an allocation of a resource, the graphical control comprising:

identification means for identifying the allocation of the resource;

a plurality of cylinders displayed in a stack within the data processing system, wherein each of the plurality of cylinders represents an allocation of the resource relative to other cylinders within the plurality of cylinders and wherein each cylinder includes an indication of an unused portion and a used portion of the allocation; and



a plurality of hot spots, wherein the plurality of hot spots is used to receive input to change the allocation of the resource.

24. A data processing system for displaying resource allocation information, the data processing system comprising:

identifying means for identifying allocations of a resource; and

displaying means for displaying a plurality of geometric shapes, wherein each geometric shape within the plurality of geometric shapes provides a graphical representation of an allocation of the resource relative to other geometric shapes within the plurality of geometric shapes, wherein each geometric shape includes an indication of an unconsumed portion of the allocation and an indication of the consumed portion of the allocation.

32. The data processing system of claim 24 further comprising:

providing means for providing an input means in the plurality of geometric shapes for receiving user input;

changing means, responsive to receiving user input directed towards a selected geometric shape within the plurality of geometric shapes, for changing the allocation of the resource represented by the geometric shape, wherein a changed allocation of the resource occurs for the selected geometric shape; and

redisplaying means for redisplaying the plurality of geometric shapes to account for changed allocation.

39. A data processing system for displaying resource allocation information, the data processing system comprising:

displaying means for displaying a plurality of cylinders in an array, wherein each cylinder within the plurality of cylinders provides a graphical representation of an allocation of the resource relative to other cylinders within the plurality of cylinders;

providing means for providing a plurality of hot spots of the plurality of cylinders, wherein each hot spot is used to receive input to adjust the allocation of the resource for the cylinder associated with the hot spot; and

adjusting means for responsive to receiving user input to adjust the allocation, adjusting the allocation of the resource for the cylinder associated with the hot spot, wherein each cylinder includes an indication of an unconsumed portion of the allocation and an indication of the consumed portion of the allocation.

44. A computer program product in a computer readable medium for displaying resource allocation information, the computer program product comprising:

first instructions for identifying allocations of a resource; and

second instructions for displaying a plurality of geometric shapes, wherein each geometric shape within the plurality of geometric shapes provides a graphical representation of an allocation of the resource relative to other geometric shapes within the plurality of geometric shapes, wherein each geometric shape includes an indication of an unconsumed portion of the allocation and an indication of the consumed portion of the allocation.

45. A computer program product in a computer readable medium for displaying resource allocation information, the computer program product comprising:

first instructions for displaying a plurality of cylinders in an array, wherein each cylinder within the plurality of cylinders provides a graphical representation of an allocation of the resource relative to other cylinders within the plurality of cylinders;

second instructions for providing a plurality of hot spots of the plurality of cylinders, wherein each hot spot is used to receive input to adjust the allocation of the resource for the cylinder associated with the hot spot; and

third instructions, responsive to receiving user input to adjust the allocation, for adjusting the allocation of the resource for the cylinder associated with the hot spot, wherein each cylinder includes an indication of an unconsumed portion of the allocation and an indication of the consumed portion of the allocation.